

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re DIVISIONAL application of)
Shunpei YAMAZAKI et al)
Based on Serial No. 09/781,154) Group Art Unit: 2817
Filed: February 13, 2001) Examiner: Tai Duong
For: ELECTRO-OPTICAL DEVICE)

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. 1.56 and 37 C.F.R. 1.97-1.99, Applicant submits herewith a Form PTO-1449 listing references known to Applicant and requests that these references be made of record in the above identified application. Copies of the references listed are submitted herewith in accordance with 37 C.F.R. 1.98(a).

The references listed on the attached Form PTO-1449 were cited in parent application Serial No. 09/781,154, and predecessor Application Serial Nos. 08/677,330; 08/447,549 and 08/024,946 and copies of the references can be found in those applications.

Respectfully submitted,



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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	Based on 09/781,154
				Filing Date	February 13, 2001
				First Named Inventor	Shunpei YAMAZAKI, et al.
				Group Art Unit	2871
				Examiner Name	Tai V. Duong
				Attorney Docket Number	0756-7190
Sheet	1	of	4		

U.S. PATENT DOCUMENTS						
Examiner Initials ¹	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
		5,389,287		Nishiyama et al.	02/14/95	
		5,223,959		Wu et al.	06/29/93	
		5,253,090		Yamazaki et al.	10/12/93	
		5,078,477		Jono et al.	01/07/92	
		5,200,846		Hiroki et al.	04/06/93	
		4,818,070		Gunjima et al.	04/04/89	
		5,087,387		Mullen et al.	02/11/92	
		5,268,783		Yoshinaga et al.	12/07/93	
		5,378,396		Yui et al.	01/03/95	
		5,178,571		Mase	01/12/93	
		5,321,553		Kunar	06/14/94	
		5,566,009		Yamazaki et al.	10/15/96	
		5,289,030		Yamazaki et al.	02/22/94	
		4,239,346		Lloyd	12/16/80	

FOREIGN PATENT DOCUMENTS							
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		Office ³	Number ⁴	Kind Code ⁵ (if known)			
		JP	02-000824			01/05/90	Abst.
		JP	02-222930			09/05/90	Abst.
		JP	49-077537			07/26/74	None
		JP	62-126677			06/08/87	Abst.
		JP	63-010777			05/02/88	Abst.
		JP	64-030272			02/01/89	Abst.

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
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		Molsen et al., "Antiferroelectric Switching...Liquid Crystals," Japan J. Appl. Phys. Vol. 31, Part 2, No. 8A, August 1, 1992, pp. 1083-1085.	

Examiner Signature		Date Considered	
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				Examiner Name	Tai V. Duong
Sheet	2	of	4	Attorney Docket Number	0756-7190

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		Number	Kind Code ² (if known)			
		5,612,799		Yamazaki et al.	03/18/97	
		4,834,509		Gunjima et al.	05/30/89	
		5,424,244		Zhang et al.	06/13/95	
		5,849,043		Zhang et al.	12/15/98	
		5,287,205		Yamazaki et al.	02/15/94	
		5,568,288		Yamazaki et al.	10/22/96	
		5,351,145		Miyata et al.	09/27/94	
		5,055,899		Wakai et al.	10/08/91	
		5,051,570		Tsujikawa et al.	09/24/91	
		4,938,565		Ichikawa	07/03/90	
		5,003,356		Wakai et al.	03/26/91	
		5,012,228		Masuda et al.	04/30/91	
		4,818,077		Ohwada et al.	04/04/89	
		4,680,580		Kawahara	07/14/87	
		4,949,141		Busta	08/14/90	
		4,103,297		McGrievy et al.	07/25/78	
		5,056,895		Khan	10/15/91	

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		JP	2-188723			07/24/90	Abst.
		JP	63-271233			11/09/98	Abst.
		JP	04-122913			04/23/92	Abst.
		JP	2-210330			08/21/90	Abst.
		JP	0051129			02/1990	Abst.
		JP	1130131			05/1989	Abst.
		JP	61-141174			06/28/86	Full
		JP	55-32026			03/06/80	Full
		JP	2-234134			9/1990	Full

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		Number	Kind Code ² (if known)			
		4,897,639		Kanayama	01/30/90	
		3,955,187		Bigelow	05/04/76	
		4,427,978		Williams	01/24/84	
		4,742,346		Gillette et al.	05/03/88	
		4,818,981		Oki et al.	04/04/89	
		4,841,294		Clerc	06/20/89	
		5,091,722		Kitajima et al.	02/25/92	
		5,250,931		Misawa et al.	10/05/93	
		5,327,001		Wakai et al.	07/05/94	
		5,495,353		Yamazaki et al.	02/27/96	
		5,084,905		Sasaki et al.	01/28/92	
		4,660,030		Maezawa	04/21/87	
		4,873,516		Castleberry	10/10/89	
		5,196,839		Johary et al.	03/23/93	
		5,408,246		Inaba et al.	04/18/95	
		5,414,443		Kanatani et al.	05/09/95	
		4,973,135		Okada et al.	11/27/90	
		5,142,272		Kondo	08/25/92	
		4,021,607		Amano	05/03/77	

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		JP	64-068732			03/14/89		Abst.
		JP	1156725			06/20/89		Full
		JP	0068724			03/1989		Abst.
		EP	0 321 073			06/21/89		Abst.
		EP	0 349 415			03/01/90		Abst.
		JP	63-082177			12/04/88		Abst.
		JP	0144297			12/1978		Abst.

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		4,649,432		Watanabe et al.	03/10/87	
		4,743,096		Wakai et al.	05/10/88	
		4,752,774		Clerc et al.	06/21/88	
		5,352,379		Nishiyama et al.	10/04/94	
		5,305,126		Kobayashi et al.	04/19/94	

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		IBM Technical Disclosure Bulletin, Vol. 33, No. 6B, November 1990, New York, pgs. 384-385, XP000108914, "Driving Method for TFT/LCD Grayscale."	
		MOLECULAR CRYSTALS AND LIQUID CRYSTALS (INC. NONLINEAR OPTICS), Vol. 185, August 1990, Chur, CH, pgs. 67-74, XP000169292, G. PM Montgomery et al., "Improving Multiplexability of Polymer-Dispersed Liquid Crystal Films by Dual Frequency Addressing."	
		Kobayashi et al., "Rear Projection TV Using High Resolution a-Si TFT LCD," pp. 114-117, SID 98 Digest, May 1989.	

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